

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND
ADOPTION OF USDA, ANIMAL AND PLANT HEALTH INSPECTION
SERVICE, WILDLIFE SERVICES (APHIS, WS)
ENVIRONMENTAL ASSESSMENT (EA)**

**ORAL VACCINATION TO CONTROL SPECIFIC RABIES
VIRUS VARIANTS IN RACCOONS, GRAY FOXES, AND COYOTES
IN THE UNITED STATES**

Purpose, Need, and Background

On March 25, 2003, the USDA, Animal and Plant Health Inspection Service, Wildlife Services (APHIS, WS) submitted a request for approval to use land owned by the Tennessee Valley Authority (TVA) for dispersal of a recombinant vaccinia-rabies glycoprotein (Raboral V-RG® Merial, Inc.) vaccine to help combat the spread of raccoon variant (strain) of rabies virus to new areas. The goal is to create zones of vaccinated raccoons that then serve as barriers to stop the further westward advance of this rabies virus variant. The genetically engineered vaccine, USDA-licensed for use in raccoons in the United States (U.S.), is contained in small, biodegradable blocks of fishmeal-type baits which are distributed by aircraft or ground placement. The Oral Rabies Vaccination (ORV) program may also assist states in monitoring and surveillance activities to determine the program's effectiveness or in implementing contingency plans that include localized raccoon population reduction wherever needed.

APHIS, WS completed an environmental assessment (EA) on its national ORV program in July 2001 that analyzed the potential effects of a proposal to continue and expand its involvement in this cooperative program in a number of additional eastern and southern states, including Virginia and Alabama. A Finding of No Significant Impact (FONSI) for this action was issued on July 30, 2001. Subsequently, a Decision/FONSI for the program's further expansion into the states of Kentucky and Tennessee was issued on August 5, 2002.

Since March, 1931 (7 U.S.C 426-426b and 426c), USDA has been authorized to conduct programs to address wildlife-caused disease problems, including suppression of rabies. In accordance with provisions of the Act of September 25, 1981, as amended (7 U.S.C 147b), the Secretary of Agriculture declared that there is an emergency that threatens agricultural production in the U.S., and authorized the transfer and use of \$4.1 million from the Commodity Credit Corporation of the United States Department of Agriculture (USDA) for the continuation of ORV programs to address rabies problems in eastern and southern states, including Alabama and Virginia in the Tennessee Valley. APHIS, WS ORV program has now expanded this federal cooperation through funding and direct involvement to two other states in the Tennessee Valley: Tennessee and Kentucky.

Rabies is as acute viral disease affecting mammals, most often transmitted through the bite of a rabid animal. It can be effectively prevented in humans and many domestic animals, but abundant and widely distributed populations of wild mammals complicate rabies control. The vast majority of cases reported to the Centers for Disease Control and Prevention (CDC) each year occur in raccoons, skunks, and bats. The number of human deaths in the U.S. has declined from more than 100 annually at the turn of the century to an average of 1 or 2 people per year in the 1990's. However, if new rabies strains as those transmitted by raccoons are not prevented from spreading to new areas of the U.S., the health threats and costs associated with rabies is expected to increase substantially. Although human deaths are rare, the estimated public health costs associated with rabies detection, prevention, and control have risen, exceeding \$300 million annually.

Oral wildlife vaccination for raccoon rabies control has been under field evaluation in the U.S. since 1990. Since the first field tests, the number of V-RG® vaccine laden baits dispersed has risen exponentially to total over 800,000 by 1997. Eleven subsequent field projects have been conducted or are in progress in northeastern states from Pennsylvania and New Jersey to Virginia and Ohio. In Kentucky and Tennessee, the land area involved in the eastern portion of these states is extensive and contains a diversity of land cover types, uses, and habitats.

Aerial distribution of ORV baits would avoid urban and suburban areas as well as lakes and rivers, while primarily targeting rural and other areas known to have suitable habitat for the target species. Where aerial distribution is not practical, baits would be distributed by careful hand placement to minimize contact by other humans, pets, or other domestic animals. Although monitoring and surveillance could occur anywhere in the respective states where health or a need to ensure the programs effectiveness occurs, APHIS, WS anticipates most of this effort to occur in the bait drop zones. Implementation of contingency plans could be needed anywhere in the involved states.

A variety of classes of land ownership, including land under TVA's jurisdiction, exists within the program boundaries. The percentage of federal land in each of the cooperating states ranges from 0.6 percent to nearly 13 percent and averages 3 percent of the total area of the affected states. To stop the westward spread of raccoon rabies, the ORV program would continue to be implemented as described in Section 1.2 of the attached EA with program activities expanding to Kentucky and Tennessee and continuing in Alabama and Virginia. As describe in Section 4.1.2.2 of the EA, the total size of the treatment area (i.e., raccoon rabies ORV barrier zones), including portions of eastern Tennessee and Kentucky and in northern and western Alabama, is estimated to be about 39,623 square miles. No TVA land occurs within the barrier zone in eastern Kentucky. However, the use of TVA land in Tennessee and Alabama could be vital in helping ensure the program's effectiveness.

Alternatives Considered and Analyzed in Detail

APHIS, WS completed an EA and FONSI on July 30, 2001 on its program to continue and expand use of ORV programs in several eastern and southern states, including Alabama and Virginia. On August 5, 2002, APHIS, WS issued a FONSI on its proposal to expand the program into Kentucky and Tennessee.

The EA prepared by the APHIS, WS evaluates in detail the environmental consequences of four alternatives; three other alternatives were considered, but not evaluated in detail because they were impractical or infeasible. Those evaluated in detail include Alternative 1, Proposed Action (the preferred alternative); Alternative 2, No Action; Alternative 3, Live-capture-vaccinate-release Programs; and Alternative 4, Provide Funds to Purchase and Distribute ORV Baits without Animal Specimen Collection or Lethal Removal of Animals under Contingency Plans. Under Alternative 1, the Proposed Action, APHIS, WS would continue to expand its existing ORV program and, with participating states including areas in Tennessee, Alabama and Kentucky, and purchase and distribute V-RG® oral vaccine baits within designated barrier zones. APHIS, WS could also continue participation in implementing state contingency plans to eradicate, suppress, and stop the spread of localized rabies outbreaks beyond the barrier zones. Under the No Action alternative, APHIS, WS would cease its involvement in the ORV program; and, conceivably, the program could be continued by the respective states without APHIS, WS assistance. Under Alternative 3, animals would be live captured, vaccinated and then released back into the wild. Under Alternative 4, APHIS, WS would provide resources and assist ORV bait distribution, but would not engage in or provide funding for monitoring and surveillance associated with animal collection and other contingency plan implementation. States would conduct these activities without APHIS, WS assistance.

TVA proposes to either execute a land use license or letter agreement to APHIS, WS for the use of its land for work associated with the accomplishment of Alternative 1, Proposed Action.

Impact Assessment

Under Alternative 1, Proposed Action (and preferred alternative) APHIS, WS would continue to expand its existing ORV program into Tennessee, Alabama and Kentucky. The EA concludes that the program would have a low probable adverse risk or effect on humans from exposure to the vaccine or baits; a low probable adverse risk or impact on target wildlife species; a very low to no probable adverse risk or effect on non-target wildlife and would have no effect on any federally or state listed threatened or endangered species; a low risk of adversely affecting pet dogs or other domestic animals that might consume ORV treated baits; a very low risk of causing disease in humans or animals; a very low risk of forming new viruses that could cause disease in humans or animals; a very low risk of injury to people or domestic animals from being struck by aerially dropped baits; that the benefits of the program would exceed the costs; and, despite the perception that the methods of killing, capturing and handling animals under the preferred action are cruel and inhuman, many animals would be saved from suffering and death due to rabies.

Under Alternative 2, No Action, no APHIS, WS funds would be available for the purchase of baits, but states would still likely fund the program to some degree. Other funds might be sought to complement the ORV program and, therefore, people would potentially come in contact with dispersed baits. However, this potential exposure and the actual risk of harm would still be exceedingly low and insignificant. Under Alternative 3, APHIS, WS would not provide funds or distribute baits, but would provide funds for live capture-vaccinate-release programs. APHIS, WS assumes, however, that even with adequate funding to conduct these types of programs, from a practical standpoint, states would choose not to implement the ORV program. Still, if implemented, APHIS, WS anticipates that the potential risks would be about the same as the ORV program under Alternative 1. Under Alternative 4, states would have to fund collection of target species for monitoring and surveillance without APHIS, WS funds or personnel assistance and less monitoring would likely be conducted. Insufficient monitoring would negatively affect the efficiency and effectiveness of ORV baiting strategies and possibly distribute baits over a larger area than needed, potentially wasting resources. The ability to stop or prevent the forward advance of specific rabies strains would likely be reduced and perhaps cause cooperative efforts to fail.

The APHIS, WS FONSI of July 31, 2002 concluded that the proposed undertaking would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. In addition, no significant cumulative effects on the quality of the human environment are expected. In its 2002 supplemental FONSI, APHIS, WS determined that environmental impacts on the quality of the human environment from expanding the ORV program to include the states of Tennessee and Kentucky would also be insignificant.

Public Involvement

During the process of developing the July 2001 EA, APHIS, WS identified issues to be addressed in its environmental review through planning and scoping meetings with state and local agencies, state health departments, academic institutions, the Ontario Ministry of Natural Resources, and CDC. Public scoping inputs were also solicited through a notice in the Federal Register (66 FR 13696-13700, March 7, 2001) and a notice of availability and request for comments on the draft EA appeared in 66 FR 27489, May 17, 2001. A letter requesting comments was also sent to potentially affected Indian Tribes. Comments received were reviewed to identify new issues or alternatives not already included in its analyses. Only four comments letters were received and all were supportive of the ORV program.

Mitigation

Because of public and interagency involvement, as well as APHIS, WS experience in the development and implementation of the ORV program, a number of key mitigation measures have been developed and incorporated into its standard operating procedures. These measures include:

- Media announcements and public information and education about the ORV program occur prior to bait drops.
- A toll-free phone number is advertised and a web site is provided to encourage people get answers to their questions.
- In the unlikely event of the disease being caused in humans, CDC can make vaccinia immune globulin available as assurance that successful treatment is available.
- Bait distribution navigators are trained to avoid dropping baits on people or structures.

TVA Review

Because aerial distributed baits would not be dropped close to lakes or rivers, TVA believes there would likely be no adverse impacts on wetlands, water quality or aquatic life. Largely because they are not hunted or trapped as intensely as in the past and there generally remains an abundance of suitable habitat, raccoon populations in the eastern Tennessee Valley are high. In regards to dispersal of vaccine to combat the spread of raccoon variant (strain) of rabies virus to new areas, TVA experience also suggests that there would be a low probable adverse risk or impact on target wildlife species; a very low to no probable adverse risk or effect on non-target wildlife; and would have no effect on any federally or state listed threatened or endangered species in Tennessee or Kentucky. Accordingly, TVA concurs with impacts of Alternative 1, the Proposed (and preferred) Action as described in the attached APHIS, WS EA. TVA also believes that the EA adequately addresses all impacts of allowing use of its lands for the ORV program.

Conclusion and Findings

TVA has critically and independently reviewed the impacts assessed in the APHIS, WS EA and confirmed its findings. The scope, alternatives considered, and contents of the EA are adequate and the impacts on the environment, including allowing ORV program use on TVA lands, have been adequately addressed. TVA has decided to adopt the APHIS, WS EA and the associated FONSI of July 31, 2001 and August 4, 2002. These documents are attached and incorporated by reference.

Based on the APHIS, WS EA, we conclude that the land use authorization and implementation of ORV program on TVA land would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.

Original signed by
 Jon M. Loney
 Manager, NEPA Administration
 Environmental Policy and Planning

June 18, 2003
 Date

Tennessee Valley Authority